

NEW RECORDS FOR SOUTH TURKEY (C4)

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ABSTRACT. A list of 107 new records for S Turkey (provinces of Konya and Içel, square C4) is given.

The following plants were collected by the authors in the Turkish provinces of Konya and Içel (C4) between 1977 and 1980. All taxa are apparently new for the grid squares as assessed by reference to the *Flora of Turkey and the East Aegean Islands* vol. 1–7, as well as recent publications containing new floristic records†. Specimens on which records are based are kept in Konya (Selçuk Üniversitesi) and Edinburgh (Royal Botanic Garden). The numbers in square brackets refer to volume and page number in the *Flora of Turkey*; comments include those on characters where our observations differ from those of the *Flora*.

Our thanks are due to Dr Kit Tan of the Flora of Turkey Unit for her kind help in preparing this paper for publication, and also to the Regius Keeper, Royal Botanic Garden, Edinburgh for the use of herbarium and library facilities.

ASPLENIACEAE

Ceterach officinarum DC. [I:52]

C4 Konya: Bucaklışa, Dede Tepe, rocky slopes, macchie, 560m, 30 v 1979, *Vural* 1801.

RANUNCULACEAE

Consolida hellespontica (Boiss.) Chater [I:133]

C4 Konya: Karaman to Bucaklışa, Meralan, fields, 1200m, 1 vi 1978, *Vural* 809.

Ranunculus dissectus Bieb., *sensu lato* [I:163]

C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1750m, 6 vii 1978, *Vural* 942.

R. cuneatus Boiss. [I:176]

C4 Konya: Ermenek, Damlaçal, open Juniperus excelsa forest, stony places, 1550m, 26 v 1979, *Vural* 1769.

Ceratocephalus falcatus (L.) Pers. [I:198]

C4 Konya: Ermenek to Tekeçati, 1400m, 4 iv 1979, *Vural* 1224.

PAPAVERACEAE

Corydalis solida (L.) Swartz subsp. *tauricola* Cullen & Davis [I:241]

C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1750m, 4 iv 1979, *Vural* 1221.

C. rutifolia (Sibth. & Sm.) DC. subsp. *erdelii* (Zucc.) Cullen & Davis [I:242]

C4 Konya: Ermenek, Yellibel, wet places, 1900m, 4 iv 1979, *Vural* 1226.

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† HUBER-MORATH, A. (1980). Ergänzungen zu P. H. DAVIS 'Flora of Turkey and the East Aegean Islands' 1–6 (1965–78). I. *Candollea* 35(2): 569–608.

—(1981). Op. cit. II. *Candollea* 36(1): 77–114.

SORGER, F. (1978). Beiträge zur Flora der Türkei II. *Stapfia* 3: 1–127.

CRUCIFERAE

Raphanus raphanistrum L. [I:270]
 C4 İçel: Mut, Kadıköy, dry river bank, 250m, 6 iv 1979, *Vural* 1193.
Rapistrum rugosum (L.) All. [I:273]
 C4 İçel: Mut, Kadıköy, dry river bank, 250m, 6 iv 1979, *Vural* 1187.
Iberis spruneri Jord. [I:311]
 C4 Konya: Ermenek, S slope of Kızıl Da., stony places, 2100m, 9 viii 1978, *Vural* 1039.
Aethionema iberideum (Boiss.) Boiss. [I:324]
 C4 Konya: Ermenek, Yelibel, stony places, 1900m, 4 iv 1979, *Vural* 1225.
Æ. armenum Boiss. [I:327]
 C4 Konya: Ermenek to Tekeçatı, dry stony steppe, 1450m, 1 vi 1979, *Vural* 1299.
Capsella rubella Reuter [I:344]
 C4 İçel: Mut, Kadıköy, river bed, 250m, 6 iv 1979, *Vural* 1189. [Sepal colour (green with red margins) and petal size as in *C. rubella* but fruit margins straight or only slightly concave as in *C. bursa-pastoris* (L.) Medik.]
Alyssum strictum Willd. [I:379]
 C4 Konya: Ermenek, Damlaçal, open Juniperus excelsa forest, stony places, 1700m, 27 v 1979, *Vural* 1686.
A. condensatum Boiss. & Hausskn. subsp. *condensatum* [I:401]
 C4 Konya: Karaman, Sertaval pass, stony and rocky places, 1630m, 23 vi 1979, *Vural* 1595.
Clypeola ciliata Boiss. [I:411]
 C4 Konya: Ermenek to Kayaönü, dry stony places, 1200m, 17 vi 1979, *Vural* 1707.
Erophila minima C. A. Meyer [I:422]
 C4 Konya: Ermenek to Tekeçatı, stony places, 1600m, 4 iv 1979, *Vural* 1245.
Aubrieta anamasicia Peşmen & Güner [I:444–447, *Aubrietia*]
 C4 Konya: Sille, W slope of Büyükgövele Tepe, 1450–1700m, 16 vi 1979, *Dural* 179. [The only other record for this species is from C3 Isparta.]
Erysimum hamosum [Blanche ex] Post [I:474]
 C4 Konya: Ermenek to Tekeçatı, stony places, 1450m, 1 vi 1979, *Vural* 1292. [Siliuae up to 50mm.]
Sisymbrium orientale L. [I:484]
 C4 Konya: Bucaklıla, dry banks of stream, 500m, 29 v 1979, *Vural* 1838.
S. loeselii L. [I:485]
 C4 Konya: Ermenek, Tekeçatı to Damlaçal, cliffs, 1400m, 6 vii 1978, *Vural* 914.

CAPPARACEAE

Capparis spinosa L. var. *spinosa* [I:496]
 C4 İçel: Mut, Suçatı to Evrenköy, 300m, 20 vii 1977, *Vural* 459.
C. ovata Desf. var. *herbacea* (Willd.) Zoh. [I:497]
 C4 Konya: Akyokuş, S slopes of Keçili De., 1150m, 14 vi 1980, *Dural* 576.

VIOLACEAE

Viola occulta Lehm. [I:529]
 C4 Konya: Karaman, Sertaval pass, stony places, 1600m, 2 vi 1977, *Vural* 400.
V. modesta Fenzl [I:530]
 C4 Konya: Ermenek to Tekeçatı, stony mountain slopes, 1600m, 4 iv 1979, *Vural* 1241.

CARYOPHYLLACEAE

Arenaria ledebouriana Fenzl var. *pauciflora* McNeill [II:35]
 C4 Konya: Ermenek, S slope of Kızıl Da., stony places, 2100m, 9 vii 1978, *Vural* 1045.
 [Flowering stems with 1–4 internodes below the inflorescence.]
Minuartia montana L. subsp. *wiesneri* (Stapf) McNeill [II:55]
 C4 Konya: Karaman to Tarlaören, steppe, 1200m, 19 vi 1979, *Vural* 1479.

M. anatolica (Boiss.)Woron. var. **tetrasticha** McNeill [II:60]C4 Konya: Ermene, S slope of Kizil Da., stony places, 2100m, 9 vii 1978, *Vural* 1041.**M. mesogitana** (Boiss.)Hand-Mazz. subsp. **kotschyana** (Boiss.)McNeill [II:64]C4 Konya: Ermene, Ezvendi, Pinus brutia forest, 1150m, 28 v 1978, *Vural* 502.**Dianthus leptopetalus** Willd. [II:114]C4 Konya: Karaman to Tarlaören, steppe, 1200m, 19 vi 1979, *Vural* 1487.**D. zonatus** Fenzl var. **aristatus** (Boiss.)Reeve [II:128]C4 Konya: Karaman, Kozlubacak, Pinus nigra forest, 1410m, 21 vi 1979, *Vural* 1445.**Silene dianthoides** Pers. [II:211]C4 Konya: Ermene, Damlalaç, stony places, 1700m, 27 v 1979, *Vural* 1351.**S. dichotoma** Ehrh. subsp. **dichotoma** [II:234]C4 Konya: Ermene, S slope of Boz Da., macchie, 1200m, 27 v 1978, *Vural* 623.subsp. **sibthorpiana** (Reichb.)Rech. [II:236]C4 Konya: Konya to Beyşehir, nr Sille, Keçili De., 1350m, 9 vi 1979, *Dural* 62.

ILLECEBRACEAE

Paronychia argyroloba Stapf [II:256]C4 Konya: Karaman, Sertavul pass, stony and rocky places, 1630m, 23 vi 1979, *Vural* 1598.

POLYGONACEAE

Rumex acetosella L. [II:284]C4 Konya: Sille, W slope of Büyükgelgele Tepe, 1500m, 16 vi 1979, *Dural* 457.**R. scutatus** L. [II:284]C4 Konya: Ermene to Tekeçati, 1600m, 22 vii 1977, *Vural* 431.

CHENOPodiaceae

Chenopodium album L. subsp. **album** var. **microphyllum** (Boenn.)Aellen [II:304]C4 Konya: Ermene, Aktepe, 1600m, 10 vii 1978, *Vural* 1076.

LINACEAE

Linum austriacum L. subsp. **glaucescens** (Boiss.)Davis [II:447]C4 Konya: Ermene to Tekeçati, field margins, 1550m, 27 v 1979, *Vural* 1657.

GERANIACEAE

Erodium leucanthum Boiss. [II:482]C4 Konya: Sille, W slopes of Büyükgelgele Tepe, 1450–1700m, 16 vi 1979, *Dural* 637.

RHAMNACEAE

Rhamnus pallasi Fisch. & Mey. [II:536]C4 Konya: Ermene, Damlaçal, Cedrus libani forest, 1700m, 7 vii 1978, *Vural* 994.

ANACARDIACEAE

Cotinus coggyria Scop. [II:543]C4 Konya: Ermene, above Keşlik, 1150m, 28 v 1978, *Vural* 563.

LEGUMINOSAE

Cercis siliquastrum L. [III:8]C4 Konya: Ermene, Ezvendi to Mihaller, Pinus brutia forest, 1050m, 28 v 1978, *Vural* 532.**Prosopis farcta** (Banks & Sol.)Macbride [III:9]C4 İçel: Mut, Suçati to Evrenköy, fallow fields, 300m, 20 vii 1977, *Vural* 461.

Spartium junceum L. [III:32]C4 İçel: Silifke to Mut, 150m, 18 vi 1979, *Vural* 1515.**Astragalus leporinus** Boiss. var. **hirsutus** (Post)Chamberlain [III:112]C4 Konya: Ermene, above Keşlik, 1150m, 28 v 1978, *Vural* 569.**A. strictifolius** Boiss. var. **kutepovii** Şirj. [III:144]C4 Konya: Sille, NE slope of Büyüktepe Tepe, 1450m, 22 vii 1980, *Dural* 666.**A. cephalotes** Banks & Sol. var. **brevicalyx** Eig [III:152]C4 Konya: Ermene, Damlacal, Cedrus libani forest, 1750m, 7 vii 1978, *Vural* 960.**A. parnassi** Boiss. subsp. **cylleneus** (Boiss. & Heldr.)Hayek [III:166]C4 Konya: Ermene, Damlacal, Cedrus libani forest, 1800m, 8 vii 1978, *Vural* 974.**A. setulosus** Boiss. & Bal. [III:201]C4 İçel: Mut, NW slope of Büyükeğri Da., 1500m, 24 vii 1977, *Vural* 443.**Ononis ornithopodioides** L. [III:377]C4 İçel: Mut to Selamli, phrygana, 330m, 6 iv 1979, *Vural* 1204.**O. reclinata** L. [III:378]C4 Konya: Bucaklıla, E slope of Çevlik Da., Pinus brutia forest, 400m, 31 v 1978, *Vural* 751.**Trifolium boissieri** [Guss. ex]Boiss. [III:400]C4 Konya: Bucaklıla, Dede Tepe, macchie on dry rocky slopes, 600m, 29 v 1979, *Vural* 1854.**Medicago minima** (L.)Bart. var. **minima** [III:498]C4 Konya: Sille, W slopes of Büyüktepe Tepe, field margins, 1350m, 16 vi 1979, *Dural* 378.**Lotus corniculatus** L. var. **alpinus** Ser. [III:527]C4 Konya: Ermene, Yellibel, SW slopes of Kızıl Da., subalpine pasture, 1800m, 9 vii 1978, *Vural* 1025.**Anthyllis vulneraria** L. subsp. **variegata** (Boiss.)Cullen [III:536]C4 Konya: Ermene to Tekeçati, mountain steppe, field margins, 1600m, 2 vi 1979, *Vural* 1816.**Hippocrepis ciliata** Willd. [III:546]C4 Konya: Bucaklıla, E slopes of Çevlik Da., Pinus brutia forest, 650m, 30 v 1979, *Vural* 1826.

ROSACEAE

Prunus divaricata Ledeb. subsp. **divaricata** [IV:11]C4 Konya: E side of Sille dam, 1250m, 14 vi 1980, *Dural* 689.subsp. **ursina** (Kotschy)Browicz [IV:11]C4 İçel: Mut, Adras Da., 1500m, 20 vii 1977, *Vural* 451.**Rubus sanctus** Schreber [IV:33]C4 İçel: Mut, Köprübaşı, edge of irrigation ditches, 300m, 23 vii 1977, *Vural* 377.**Potentilla recta** L. [IV:53]C4 Konya: Ermene to Tekeçati, field margins, 1600m, 2 vi 1979, *Vural* 1824.**Crataegus szovitsii** Pojark. [IV:138]C4 Konya: Ermene, Koças, Cedrus libani forest, 1500m, 11 vii 1978, *Vural* 1102.

PUNICACEAE

Punica granatum L. [IV:173]C4 Konya: Karaman, Bucaklıla, cultivated, 400m, 30 v 1978, *Vural* 834.

CRASSULACEAE

Sedum litoreum Guss. [IV:239]C4 Konya: Ermene, Kuruseki, macchie, 1100m, 27 v 1978, *Vural* 614.

UMBELLIFERAE

Smyrnium connatum Boiss. & Kotschy [IV:338]C4 Konya: Ermene, S slopes of Boz Da., 1200m, 27 v 1978, *Vural* 634.

Pimpinella cretica Poiret var. *cretica* [IV:356]C4 Konya: Bucaklışa, Dede Tepe, dry rocky slopes, macchie, 560m, 29 v 1979, *Vural* 1881.**Hippomarathrum microcarpum** (Bieb.) Fedtsch. [IV:391]C4 Konya: Ermenek, Tekeçati, replanted mixed *Pinus nigra* forest, 1450m, 10 vii 1978, *Vural* 1092.**Papleurum zoharii** Snogerup [IV:413]C4 Içel: Mut, Suçati to Evren, 300m, 20 vii 1977, *Vural* 470.**Ferula rigidula** DC. [IV:446]C4 Konya: Ermenek, S slope of Boz Da., 1200m, 27 v 1978, *Vural* 638.**F. elaeochrysis** Korovin [IV:449]C4 Konya: Ermenek, Damlaçal, *Cedrus libani* forest, 1750m, 6 vii 1978, *Vural* 928.**Crenosciadium silifolium** Boiss. & Heldr. [IV:473]C4 Konya: Ermenek, Aktepe, Boğazçayır, boggy places, 1600m, 10 vii 1978, *Vural* 1055. [Stem 15–70cm. Basal leaves 1–2-pinnate, 5–30cm including petioles; leaflets 2–4-paired, obovate to orbicular, 10–25mm, crenate-dentate. Stem leaves reduced, simple to 1-pinnate; leaflets of the stem leaves in 2 pairs, linear-lanceolate, c.25mm, remotely serrate. Umbels very unequally 3–6-rayed, stalks dichotomously branched.]**Daucus carota** L. [IV:531]C4 Içel: Mut, NW slopes of Büyükeğri Da., 1500m, 24 vii 1977, *Vural* 436.

VALERIANACEAE

Valerianella dactylophylla Boiss. & Hohen. [IV:564]C4 Konya: Ermenek, Damlaçal, stony places, 1700m, 27 v 1979, *Vural* 1348.**V. glomerata** Boiss. & Bal. [IV:577]C4 Konya: Ermenek, Damlaçal, open *Juniperus excelsa* forest, stony places, 1500m, 26 v 1979, *Vural* 1736.

COMPOSITAE

Xanthium strumarium L. subsp. *cavanillesii* (Schouw) D. Löve & P. Dansereau [V:48]C4 Içel: Silifke, sandy places nr sea, 17 vi 1979, *Vural* 1387.**Phagnalon rupestre** (L.) DC. [V:79]C4 Içel: Mut, Suçati to Kadıköy, phrygana on stony slopes, 270m, 6 iv 1979, *Vural* 1363.**Calendula arvensis** L. [V:171]C4 Içel: Mut to Selamlı, 300m, 7 iv 1979, *Vural* 1219.**Matricaria chamomilla** L. var. *recutita* (L.) Grierson [V:294]C4 Içel: Mut, Kadıköy, Göksu river bed, 250m, 6 iv 1979, *Vural* 1192.**Onopordum sibthorianum** Boiss. & Heldr. [V:367]C4 Konya: Ermenek to Tekeçati, limestone slope, mountain path, 1450m, 7 vii 1978, *Vural* 981.**Centaura cariensis** Boiss. subsp. *maculiceps* (O. Schwarz) Wagenitz [V:492]C4 Konya: Karaman, Ağacıyurdu, *Pinus nigra* forest, 1400m, 21 vi 1979, *Vural* 1421.**C. drabifolia** Sm. subsp. *austro-occidentalis* Wagenitz [V:514]C4 Konya: Ermenek to Tekeçati, 1450m, 7 vii 1978, *Vural* 964.**Carlinea involucrata** Poiret subsp. *libanotica* (Boiss.) Meusel & Kästner [V:600]C4 Içel: Mut to Silifke, roadside, 200m, 17 vi 1979, *Vural* 1384.**Scorzonera cana** (C. A. Meyer) Hoffm. var. *radicosa* (Boiss.) Chamberlain [V:637]C4 Konya: Ermenek, S slopes of Kızıl Da., stony places, 2100m, 9 vii 1978, *Vural* 1033.**S. kotschyana** Boiss. [V:656]C4 Içel: Mut to Selamlı, phrygana on stony slopes, 330m, 7 iv 1979, *Vural* 1205.**Tragopogon latifolius** Boiss. var. *latifolius* [V:663]C4 Konya: Karaman to Bucaklışa, Meraalan, steppe, 1200m, 1 vi 1978, *Vural* 825.**Pilosella hoppeana** (Schultes) C. H. & F. W. Schultz subsp. *troica* (Zahn) Sell & West [V:750]C4 Konya: Sille, NE slope of Büyükgelgele Tepe, 1450m, 22 vii 1980, *Dural* 620.**P. × macrotricha** (Boiss.) C. H. & F. W. Schultz [V:757]C4 Konya: Sille, W slope of Büyükgelgele Tepe, 1550m, 2 viii 1980, *Dural* 621.**P. × maschukensis** (Litw. & Zahn) Soják [V:759]C4 Konya: Sille, NE slope of Büyükgelgele Tepe, 1350m, 2 viii 1980, *Dural* 622.

Taraxacum uzunoglui van Soest [V:801]

C4 Konya: Ermene, Damlaçal, open Juniperus excelsa forest, stony places, 1700m, 27 v 1979, *Vural* 1339.

Chondrilla juncea L. var. *juncea* [V:812]

C4 Konya: Ermene to Tekeçati, 1450m, 10 viii 1979, *Vural* 1934; Sille, summit of Büyügevele Tepe, 1700m, 2 viii 1980, *Dural* 600.

CAMPANULACEAE

Asyneuma limonifolium (L.)Janchen subsp. *pestalozzae* (Boiss.)Damboldt [VI:72]

C4 Konya: Ermene to Tekeçati, steppe, field margins, 1600m, 2 vi 1979, *Vural* 1810.

ASCLEPIADACEAE

Vincetoxicum canescens (Willd.)Decne. subsp. *canescens* [VI:168]

C4 Konya: Ermene, S slope of Boz Da., 1200m, 27 v 1978, *Vural* 635.

V. fuscatum (Hornem.)Reichb. fil. subsp. *fuscatum* [VI:171]

C4 Konya: Sille, NE slope of Büyügevele Tepe, 1350m, 27 vii 1980, *Dural* 567.

PEDALIACEAE

Sesamum indicum L. [VI:196]

C4 Içel: Mut, Suçati to Evren, cultivated, 300m, 20 vii 1977, *Vural* 465.

BORAGINACEAE

Lappula sessiliflora (Boiss.)Gürke [VI:260]

C4 Konya: S slopes of Takkeli Da., 1350m, 13 vi 1979, *Dural* 573.

SOLANACEAE

Hyoscyamus niger L. [VI:454]

C4 Konya: Ermene, roadsides, 1275m, 2 vi 1979, *Vural* 1803.

SCROPHULARIACEAE

Linaria genistifolia (L.)Miller subsp. *praealta* (Boiss.)Davis [VI:660]

C4 Konya: Ermene, Damlaçal, Cedrus libani forest, 1730m, 6 vii 1978, *Vural* 923.

Veronica thymoides P. H. Davis subsp. *hasandaghensis* M. A. Fischer [VI:740]

C4 Konya: Ermene, Tekeçati, mountain steppe, 1650m, 31 v 1979, *Vural* 1312.

OROBANCHACEAE

Orobanche ciliicia G. Beck [VII:10]

C4 Konya: Karaman to Seyithasan, steppe, 1200m, 20 vi 1979, *Vural* 1900.

LABIATAE

Ajuga chamaepitys (L.)Schreber subsp. *rechingeri* (M. Bilik)P. H. Davis [VII:52]

C4 Konya: Ermene, Kuruseki, in Quercus coccifera scrub, 1100m, 27 v 1978, *Vural* 688.

Marrubium rotundifolium Boiss. [VII:173]

C4 Konya: Ermene, dry rocky slopes, 1250m, 16 vi 1979, *Vural* 1700. [Stems 30–55cm.]

Acinos rotundifolius Pers. [VII:344]

C4 Konya: Karaman, Sertavul pass, stony places, 1650m, 23 vi 1979, *Vural* 1603.

PLUMBAGINACEAE

Limonium virgatum (Willd.) Fourr. [VII:470]
C4 İçel: Silifke, sea shore, 17 vi 1979, *Vural* 1393.

PLANTAGINACEAE

Plantago atrata Hoppe [VII:511]
C4 Konya: Ermenek to Tekeçati, mountain steppe, 1640m, 31 v 1979, *Vural* 1307.

SANTALACEAE

Thesium bergeri Zucc. [VII:538]
C4 Konya: Karaman, Bucaklısla, N slope of Çevlik Da., 600m, 30 v 1978, *Vural* 846.

RUBIACEAE

Galium humifusum Bieb. [VII:785]
C4 İçel: Mut, Kadıköyü, ditchsides, 270m, 17 vi 1979, *Vural* 1375.
G. stepparum Ehrend. & Schönb.-Tem. [VII:842]
C4 Konya: Karaman to Tarlaören, steppe, 1200m, 19 vi 1979, *Vural* 1481.